

Claims.

1. An electrically powered toothbrush is provided comprising:
a handle which contains an electric motor and an electrical power supply,
a head part connected to the handle and incorporating an oral hygiene part to
5 be driven in motion by the electric motor,
a transmission means between the motor and the oral hygiene part
the head part being flexibly and resiliently connected to the handle such that
the head part can move resiliently under pressure of the oral hygiene part against a
tooth surface,
10 the motor being moveably mounted within the handle,
and the head part and motor are connected together such that said movement
of the head part under the pressure of the oral hygiene part against a tooth surface is
communicated to the motor to cause the motor to move in response to said movement,
characterised in that:
15 the assembly of motor and transmission means is pivotally connected to the
handle at a pivot point between the brush head and the motor.
2. An electrically powered toothbrush according to claim 1 characterised in that
the assembly of motor and transmission means is pivotally connected to the handle at
20 a pivot point located along the drive shaft between the motor and the brush head.
3. An electrically powered toothbrush according to claim 1 characterised in that
the transmission means includes a gearbox and the assembly of motor and
transmission means is pivotally connected to the handle at a pivot point located along
25 the drive shaft between the gear box and the brush head.
4. An electrically powered toothbrush according to any one of claims 1, 2 or 3
characterised in that the pivot point allows the head part to move pivotally within the
envelope of a cone with its apex at the pivot point, or about an arc centred on the pivot
30 point.
5. An electrically powered toothbrush according to any one of the preceding
claims characterised in that the assembly of motor and transmission means is pivotally

connected to the handle at a pivot point provided by a handle which has a resiliently flexible section, and the transmission means passes through this resiliently flexible section.

- 5 6. An electrically powered toothbrush according to claim 6 characterised in that the resiliently flexible section is provided by a handle in two longitudinally disposed parts; a first part relatively further from the brush head, and a second part relatively closer to the brush head, a drive shaft passing through the first part of the handle in a direction toward the brush head, with a resiliently flexible connection between the
10 first and second parts.

7. An electrically powered toothbrush according to claim 6 characterised in that the resiliently flexible connection is provided by an elastomer material section between the first and second parts.

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8. An electrically powered toothbrush according to claim 7 characterised in that the elastomer material section is provided by means of a composite plastics material – elastomer material section between the first and second part.

- 20 9. An electrically powered toothbrush according to claim 7 characterised in that the composite region comprise a plastics material section between the first and second parts incorporating one or plural apertures in the plastics material which contain the elastomer material.

- 25 10. An electrically powered toothbrush according to claim 9 characterised in that the one or plural apertures are in the form of elongate slots elongated in a direction transverse to the longitudinal direction.

- 30 11. An electrically powered toothbrush according to any one of claims 6 to 10 characterised in that the handle comprises a shell made of a plastics material and enclosing the internal components of the handle.

12. An electrically powered toothbrush according to claim 11 characterised in that the motor or the assembly of motor and transmission means may be unsupported within the handle except at the point at which the drive shaft passes through the shell,
- 5 13. An electrically powered toothbrush according to claim 6 characterised in that a sleeve is provided having a bore through which the drive shaft passes, and the drive shaft passes through the resiliently flexible section via the sleeve.
14. An electrically powered toothbrush according to claim 13 characterised in that
10 the sleeve is rigidly connected to the first part of the shell.
15. An electrically powered toothbrush according to any one of the preceding claims characterised in that the drive shaft comprises a stub shaft extending from the end of the handle closest to the brush head, and to which a replaceable head part may
15 be connected.
16. A toothbrush according to any one of claims 1 - 15 characterised in that the transmission means transmits rotary motion to the brush head to drive the brush head in rotary oral hygiene motion.
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17. A toothbrush according to any one of claims 1 - 15 characterised in that the transmission means transmits motion to the brush head to drive the brush head in motion in which the oral hygiene part is moved both reciprocally longitudinally in the head part – handle direction and also in oscillatory rotation about a rotation axis
25 generally parallel to the longitudinal direction.
18. A handle for an electrically powered toothbrush is provided comprising:
a handle which contains an electric motor and an electrical power supply, and is attachable to a head part,
30 a transmission means between the motor and the oral hygiene part
the head part being flexibly and resiliently connected to the handle such that the head part can move resiliently under pressure of the oral hygiene part against a tooth surface,

the motor being moveably mounted within the handle,
and the head part and motor are connected together such that said movement of the head part under the pressure of the oral hygiene part against a tooth surface is communicated to the motor to cause the motor to move in response to said movement,

5 *characterised* in that:

the assembly of motor and transmission means is pivotally connected to the handle at a pivot point between the brush head and the motor.